



SD1105 Matlab 3.0 credits

Matlab

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for SD1105 valid from Autumn 2007

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Basic course in linear algebra.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The course aims to provide a general understanding of MATLAB as a programming language.

Students graduating from the course shall be able to:

- Starting from a given technical situation and given mathematical formulas, to plan, program, present and defend a solution to a mechanical problem using MATLAB.

Course contents

The course is a teacher-assisted self-study course in computing and programming language MATLAB. The course is examined by an oral presentation of a solution to a programming assignment. The assignment considers a realistic technical problem that a third year student is able to solve with a full understanding of related mathematical, numerical and mechanical aspects. In that respect the problem descriptions provides a descriptive (qualitative) introduction to these courses. The programming assignment shall further illustrate the model concept in a practical virtual simulation task and the results will have to be a realistic solution for a typical engineering task to further highlight and stimulate continuing studies.

Course literature

Griffiths, D. F. (2001). *An Introduction to MATLAB*. With additional material by Ulf Carlsson, KTH. The University of Dundee.

Carlsson, U. (2009). *Miscellaneous exercises in MATLAB*. KTH Aeronautical and Vehicle Engineering.

Examination

- TEN1 - Assignment, 3.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Other requirements for final grade

Oral defence of a solution to an assignment (3 HP)

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.